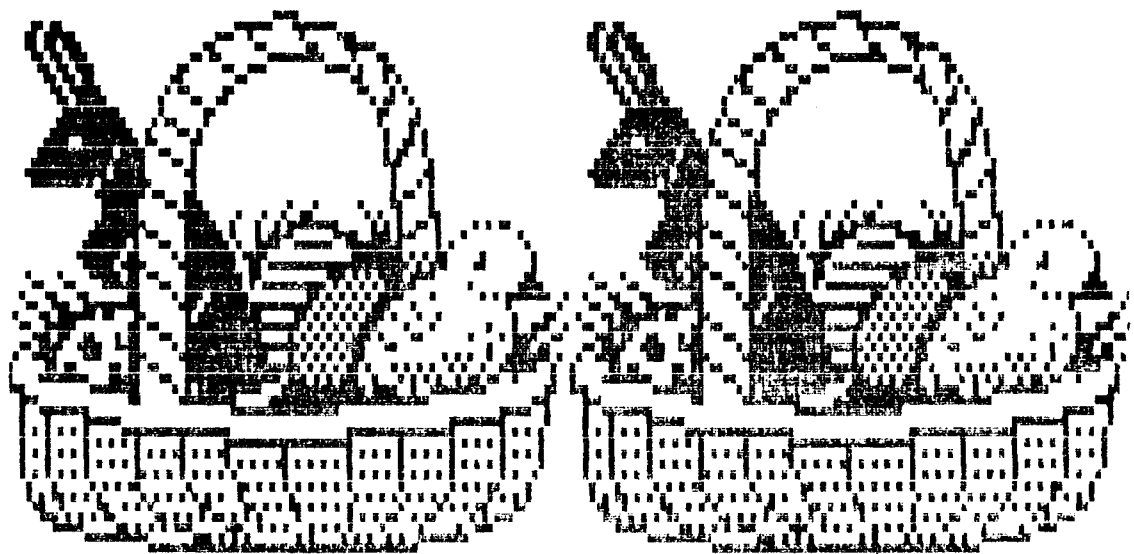


Hunter Valley

VZ

Journal



COMPUTER SHOW - OTHER VZ USER GROUPS & PUBLICATIONS Page 3

DISK MENU REVIEW by Joe LEON Page 4

This Disk Menu program might be just for you if you keep typing in like me KUN instead of BKUN or vice versa.

NSW VZ FOOTY TAB by Paul LEON Pages 5-6

With Rugby League mania upon us again there's plenty (Expert ?) punters out there trying to pick the winners. While this program wont give you better results, just random selection and it wont be clouded with emotion either.

HEX CONSTANTS modified by Dave MITCHELL Page 7

Some programs seem to attract modifications and HEX is one of them. If you compute in HEX or just trying your hand at it then this program is for you.

CAR RUNNING EXPENSES converted by Joe LEON Page 8

This is only a simple program to get you started. It gives petrol costs, MPG, L/100 KM, etc. Like any program you can modify it according to your own needs.

HINTS & TIPS by Robert GREGG Page 9

Robert shares his experiance at repairing his AC PLUG PACK ADAPTOR and how he went about it. The Ed. also makes a comment on the subject as well.

DOT MATRIX PRINTERS PART II by Larry TAYLOR :- Pages 10-13

The second part of Larry's article explains how to use your D.M.Printer for graphics and not content with that Larry also gives you the means to design your own. On page 12 you'll find a D.M.Graphics Editor while on page 13 Larry shows an alternative method to achieve quite complex designs.

USING HEAD CLEANING DISK by Joe LEON :- Page 14

Looks like MURPHY is not content to leave me alone by paying me another visit. Even persons familiar with drives can get caught. A disk can be inserted into your drive 8 ways, but only one way if you want to use a CLEANMASTER head cleaning disk.

SOFTWARE REVIEW by Peter J. HILL :- Page 15

Peter reviews Galactic Empires which was written and is marketed by Scott LE BRUN. Peter gets very enthusiatic when he comes accross a game he likes and he sure seems to like this one.

INTERRUPT FUNCTION KEYS by Robert QUINN Pages 16-18

Robert shows how to enable SIFT X, C, V and B and supplying routines for three of them. The most exiting one being CCS (CURSOR CLEAR SCREEN) routine. By pressing SHIFT and C keys the screen is cleared from cursor position accross and down to bottom of screen. It would be nice if we could have CCS available all the time. Now if we only could bottle it.

FOR SALE - OUR USUAL ADS APPEAR ONCE MORE :- Pages 19-20

BELIEVE IT OR NOT :-

The Committee of Hunter Valley VZ Users' Group wishes all our members and their families a happy EASTER. We also hope that the Easter Bunny didn't miss any of you with his goodies.

NEWCASTLE MICROCOMPUTING EXHIBITION :-

Hunter Valley VZ Users' Group has been invited to participate in above annual show and barring unforeseen circumstances we will be there again this year.

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Besides my VZ's I also have a Commodore C64 with disk drive. For the C64 there's an overabundance of utilities including disk menus. I was pleased to see one finally make an appearance for the VZ and it is the subject for this review.

To use the DISK MENU is simplicity itself. Just BRUN "MENU" and the disk DIRECTORY is loaded into memory and appears on the centre of the screen in a single column. By using the UP/DOWN ARROW keys it is possible to step UP/DOWN through the directory. The cursor will INVERSE each file as it passes over it.

Only a maximum of 16 files will be displayed at any one time. If your disk has more files than that then simply keep scrolling down till rest of directory is displayed.

By pressing the RETURN key a 'T' or 'B' type file will be LOADED and RUN. Other types will be ignored like DATA, WORD PROCESSOR and SOURCE CODE files as will any 'B' files which load into VIDEO RAM like HI-RES screens.

If a basic program is loaded and BREAK key is used then it's possible to return to the MENU by simply typing in MENU and pressing RETURN. There's no need to reload from disk again. It's a nice and thoughtful feature.

When MENU is first BRUN or recalled from basic the first file at top of screen shown is called NEWDISK. By pressing RETURN over NEWDISK a new directory is loaded into memory. Therefore there's no need to SAVE MENU to each disk as the NEWDISK function allows you to inspect many directories before finally choosing program to LOAD and RUN.

I've been using MENU for a few months now and found it very handy and easy to use. There are two improvements that I'd like to see done to it and that is an INVERSE function of screen using the INVERSE key and a QUIT option using the (-) key.

INVERSE - If a BINARY program is loaded then you're stuck in a light green screen which is the start up screen of MENU and my preference is the inverse of it.

QUIT - If after BRUNNING MENU you change your mind you have to load basic file or switch OFF/ON VZ to regain control.

PLEASE NOTE :- The above two comments are not criticisms, but suggestions hopefully leading to improvements and are my own personal opinions.

Like all the utilities that were written by Larry TAYLOR and I've had the pleasure of using, MENU follows the same high standard and ease of use we have come to expect from him. I have no hesitation in recommending this program to disk users.

The DISK MENU program is available from :-

Brisbane VZ Users Workshop - C/O 63 Tingalpa St. Wynnum West 4178
PRICE \$10.00 - Please check for correct price before purchasing.

NOTE :- In the Hunter Valley VZ users can contact Joe LEON for a demonstration of DISK MENU at club meetings.

PICK THE WINNER	
1 (H) V (A)	6 (H) V (A)
2 (H) V (A)	7 (H) V (A)
3 (H) V (A)	8 (H) V (A)
4 (H) V (A)	
5 (H) V (A)	
REPEAT DRAW	MENU END

PICK THE MARGINS							
TEAM:	MARGIN	1	2	3	4	5	6
GOAL	13 +	1	1	1	1	1	1
GOAL	1-12	2	2	2	2	2	2
GOAL	---	3	3	3	3	3	3
GOAL	1-12	4	4	4	4	4	4
GOAL	13 +	5	5	5	5	5	5
REPEAT DRAW	MENU	END					

```

10 GOTO60
50 CLS:RETURN
60 F1$="-----":REM 30 (-) SYMBOLS
70 POKE30862,80:POKE30863,52:COLOR,0:POKE30744,96
90 :
100 CLS:POKE30777,1:COLOR7:PRINT@4,"PICK THE WINNER"
110 RESTORE:FORPL=32TO63
120 PRINT@PL,"=";:PRINT@PL+192,"=";:NEXT
130 PRINT@103,"MENU FOR PICK THE WINNER"
140 PRINT@129,"PRESS"
150 PRINT@167,"MENU FOR PICK THE MARGIN":SOUND20,1;30,1;20,1
160 A$="":A$=INKEY$:A$=INKEY$:IFA$=""THEN160ELSEX=USR(X)
170 IFA$="W"THEN300'WINNER
180 IFA$="M"THEN500'MARGIN
190 GOTO160
290 :
300 FL=0:CLS:POKE30777,1:PRINT@36,"PICK THE WINNER"
310 COLOR3:FORI=4TO27:PRINT@I,"=":PRINT@I+64,"=":NEXT
320 PRINT@128," 1 (H) V (A) 6 (H) V (A)":PRINT
330 PRINT" 2 (H) V (A) 7 (H) V (A)":PRINT
340 PRINT" 3 (H) V (A) 8 (H) V (A)":PRINT
350 PRINT" 4 (H) V (A)":PRINT
360 PRINT" 5 (H) V (A)":PRINT:IFFL=1THEN400ELSEFORI=97TO126
370 PRINT@I,"-":PRINT@I+64,"-":PRINT@I+128,"-":PRINT@I+192,"-"
380 PRINT@I+256,"-":PRINT@I+320,"-":X=USR(X):NEXT
390 SOUND30,1:GOSUB900'"PRESS HERE"
400 POKE31477,134:GOSUB50:SOUND0,4:COLOR,1:FOR I=0 TO 7
410 P=134+I*64:IFI>4 THEN P=149+(I-5)*64
420 A$(1)="(H)":A$(2)="(A)"
430 RN=RND(2):A$(RN)="(M)"
440 PRINT@P,"          ":X=USR(X):PRINT@P,A$(1);" V ";A$(2);
450 X=USR(X):NEXT
460 POKE31477,132:GOSUB800'"SELECT HERE"
470 FL=1:COLOR3:GOTO320
490 :
500 CLS:POKE30777,1:PRINT@4,"PICK THE MARGINS"
510 COLOR3:PRINT@82,"MATCH NO."
520 PRINT@98,"TEAM:MARGIN 1 2 3 4 5 6":
530 FORI=33TO62:PRINT@I,"=":PRINT@I+96,"=":NEXT
540 FORI=1TO5:READD$:PRINTD$;
550 FORX=1TO6:PRINTI;:X=USR(X):NEXT
560 PRINT:PRINTF1$:NEXT
570 GOSUB900'"PRESS HERE"
580 GOTO700
590 COLOR,1:FORX=1TO16STEP3
600 FORI=1TO5
610 B$(I)=CHR$(I+48)
620 NEXT
    
```

```

630 SL=RND(5)
640 B$(SL)="■"
650 FORY=173TO446STEP64
660 Z=INT(Y/64)-1
670 PRINT@X+Y,B$(Z)
680 NEXT:SOUND25,1:NEXT
690 POKE31477,132:GOSUB800' "SUBMENU"
700 POKE31477,134:GOSUB50:SP=161:FP=449:S=13:F=29:ST=3
710 FORA=SP TO FP STEP64
720 FORB=S TO F STEP ST
730 PRINT@A+B,"?";
740 X=USR(X)
750 NEXT:NEXT
760 SOUND0,4:GOTO590
790 :
800 PRINT@482," REPEAT DRAW MENU END ";:COLOR,0
815 POKE30777,35:SOUND25,1
820 A$="":A$=INKEY$:A$=INKEY$:IFA$=""THEN820ELSEX=USR(X)
830 IF A$="R"THENRETURN
840 IF A$="M"THEN100
850 IF A$="E"THEN:CLS:END
860 GOTO820
890 :
900 COLOR7:PRINT@482," REPEAT DRAW MENU END ";:SOUND25,1
910 I$="":I$=INKEY$:I$=INKEY$:IFI$=""THEN910ELSEX=USR(X)
920 IFI$<>" "THEN910ELSERETURN
930 :
950 DATA " HOME 13 + ■", " HOME 1-12 ■", " MENU ---- ■"
960 DATA " MENU 1-12 ■", " MENU 13 + ■"
990 :
991 '*****
992 '* FOOTY TAB SELECTOR WRITTEN BY PAUL LEON *
993 '* FOR HIS DAD IN JULY 1984 AND UPDATED IN MARCH 1988 *
994 '*****
995 '* NOTE :- USE SHIFT 'J' '■' FOR GRAPHIC CHARACTERS *
996 '* IN LINES 320 TO 360 AND LINES 950 TO 960 AS WELL *
997 '*****
998 '* NOTE - THERE'S NO NEED TO TYPE IN LINES 991 TO 999 *
999 '*****

```

With the RUGBY LEAGUE season in full swing punters might find this Footy Tab Selector handy. Besides trying to pick a winner you should also be able to learn a bit about programming. Paul used a few fancy screen handling tricks which you may like to try in your own programs.

This program is menu driven and requires no instructions. When typing in enter line 10 and 50 exactly as shown. It has to do with TOKENS and the RANDOM function and lines 50, 400, 460, 690 and 700.

You'll notice line 50 is unusual, it reads 50 CLS:RETURN, then if we look at line 400 we see POKE31477,134:GOSUB50. If we PEEK at address 31477 we should get 132 which is the TOKEN for CLS and is in line 50. Line 400 POKES 134 which is the TOKEN for RANDOM and replaces CLS in line 50.

RANDOM makes the numbers more random and the POKE in line 460 replaces RANDOM with CLS in line 50 after selecting the draw. Because RANDOM is a function not normally available from the keyboard the above approach was adopted.

MODIFIED BY DAVE MITCHELL

This is quite a usefull routine. It was first written for the TRS-80 by MR.R.Bowler in 1981 and modified by MR.L.Villani for the VZ200+16k in 1984 and printed in VZ NEWS. In 1987 I modified the existing routine to relocate itself at the top of memory. It enables the User to print the decimal equivalent of hex numbers, Poke and Peek using hex and for adding, subtracting, multiply and divide with a mixture of hex and hex or hex and decimal numbers.

The command '&' is a TRS-80 command that can be used in the VZ. TRY THIS :- PRINT& or POKE& - When RETURN is pressed you will be greeted by this error.

?DISK COMMAND? SYNTAX ERROR

> ERROR

The address for the '&' command is in RAM and can be easily changed to suit your requirements. The command to enable the routine is '&H'.

EXAMPLE PRINT&H 7000 will return 28672.
 PRINT&H7000+&H41 or PRINT&H7000+65 both will return 28737.
 PRINTPEEK(&H7000) will PEEK the address 28672.
 POKE&H7000,&H41 will POKE the letter 'A' into address 28672
 at the top left side of the screen.

- LINE 10 The POKE 30777,1 speeds up the message (lines 10-30 prints the sign on message).
- 40 Finds the top of memory minus 59 bytes.
- 50 Sets the top of memory to the new top.
- 60 Clears 50 bytes of memory for strings and resets 30777.
- 70 Sets the address for the command '&H'.
- 90-100 Places the machine code into the addresses above the top of memory.
- 110 The two pokes is the same as NEW except the sign on message is left on the screen.
- 120-150 Decimal equivalent of the machine code routine in DATA statments.

The basic program will NEW itself when run. AVOID rerunning the program without resetting the VZ as this will lower the top of memory each time the program is run.

```

2 *****
4 *  HEX CONSTANTS MODIFIED FOR THE VZ IN 1987 BY D.MITCHELL *
6 *****
8 :
10 POKE30777,1:CLS:PRINT"      TOP OF MEMORY SEEKING"
20 PRINT"      HEX CONSTANTS":PRINT
30 PRINT" MODIFIED FROM VZ NEWS ISSUE #5  NOVEMBER 1984":PRINT
40 T=PEEK(30897)+256*PEEK(30898)-59
50 POKE30897,T-(256*INT(T/256)):POKE30898,INT(T/256)
60 CLEAR50:POKE30777,35
70 POKE31125,PEEK(30897)+1:POKE31126,PEEK(30898)
80 T%=PEEK(30897)+256*PEEK(30898)-65535
90 FORI%=1TO59
100 READA%:POKET%,A%:T%=T%+1:NEXT
110 POKE31465,0:POKE31466,0:END
120 DATA 215,207,72,6,4,17,0,126,254,48,56,31,254,58,56,10
130 DATA 254,65,56,23,254,71,48,19,214,7,230,15,72,6,4,203,35
140 DATA 203,18,16,250,179,95,65,215,16,220,120,254,4,210,151
150 DATA 25,237,83,33,121,62,2,50,175,120,201
    
```

```

=====
| CAR RUNNING EXPENSES |
=====
PRICE OF PETROL BOUGHT ? 28.00
PRICE/LITRE IN CENTS ? 57.90
DISTANCE IN KILOMETRES ? 318.4
=====
NO. OF LITRES BOUGHT = 48.86
KILOMETRES PER LITRE = 6.50
MILES PER GALLON = 18.57
LITRES/100 KILOMETRES = 15.19
=====
LIKE TO TRY AGAIN Y/N
    
```

```

=====
| CAR RUNNING EXPENSES |
=====
PRICE OF PETROL BOUGHT ? 28.00
PRICE/LITRE IN CENTS ? 57.90
DISTANCE IN KILOMETRES ? 425.8
=====
NO. OF LITRES BOUGHT = 48.86
KILOMETRES PER LITRE = 8.80
MILES PER GALLON = 24.83
LITRES/100 KILOMETRES = 11.36
=====
LIKE TO TRY AGAIN Y/N
    
```

```

10 *****
20 * CAR RUNNING EXPENSES WAS CONVERTED FOR THE VZ 200 *
30 * AND VZ 300 FROM A MICROBEE PROGRAM BOOK BY J.LEON *
40 *****
50 :
60 MI$=" =====":REM 30 EQUAL SYMBOLS
70 SP$=" " :REM 32 SPACES
80 F1$="###.##"
90 :
100 CLS:COLOR,0:POKE30744,96
110 COLOR7:PRINT@4,"| CAR RUNNING EXPENSES |"
120 PRINTMI$:PRINT:SOUND25,1
130 PRINT@96,;:INPUT" PRICE OF PETROL BOUGHT ";PO
140 IFPO=0ORPO>99THENPRINT@96,SP$:GOTO130
150 PRINT@128,;:INPUT" PRICE/LITRE IN CENTS ";CO
160 IFCO=0ORCO>99THENPRINT@128,SP$:GOTO150
170 PRINT@160,;:INPUT" DISTANCE IN KILOMETRES ";DO
180 IFDO=0ORDO>999THENPRINT@160,SP$:GOTO170
190 :
200 PRINT:PRINTMI$:PRINT
210 LO=100*PO/CO:KO=DO/LO:MO=2.82*KO:L1=100*LO/DO
220 PRINT" NO. OF LITRES BOUGHT = ";USING F1$;LO
230 PRINT" KILOMETRES PER LITRE = ";USING F1$;KO
240 PRINT" MILES PER GALLON = ";USING F1$;MO
250 PRINT" LITRES/100 KILOMETRES = ";USING F1$;L1
260 PRINT:PRINTMI$
290 :
300 PRINT@485,"LIKE TO TRY AGAIN Y/N";:SOUND30,1
310 IN$="":IN$=INKEY$:IN$=INKEY$:IFIN$=" "THEN310ELSE SOUND20,1
320 IFIN$="Y"THEN100ELSEIFIN$="N"THENCLS:ENELSE310
390 :
400 *****
410 * - - - - - I N S T R U C T I O N S - - - - - *
420 * ----- *
430 * PRICE OF PETROL BOUGHT ? - ENTER SUM PAID AT SERVICE *
440 * STATION IN DOLLARS AND CENTS - IE :- 28.00 *
450 * ----- *
460 * PRICE/LITRE IN CENTS ? - IE :- 57.90 *
470 * ----- *
480 * DISTANCE IN KILOMETRES ? - ENTER DISTANCE TRAVELLED *
490 * SINCE YOU LAST FILLED UP YOUR PETROL TANK. IE:- 318.4 *
500 * ----- *
510 * ONCE YOU PRESS RETURN ON YOUR LAST QUESTION, DETAILS *
520 * OF YOUR RUNNING EXPENSES WILL BE DISPLAYED ON SCREEN. *
530 * ----- *
540 * - - - - - H A P P Y - M O T O R I N G - - - - - *
550 *****
560 * NOTE -:- DO NOT TYPE IN LINES 10 TO 50 AND 390 TO 570 *
570 *****
    
```


FIXING AC PLUG PACK ADAPTOR :-

This started to cut out at embarrassing moments. Moving the cord near where it exited from the case 'CURED' it, but any bump cut power. I was unwilling to 'RETURN TO HONG KONG' and operating on the principle what one man puts together, another can take it apart.

I seperated the case sections where they join in the middle. Tools used - Sharp cutting knife and electric screw driver, plus a fair bit of pushing and shoving. It seemed to work so I put it back together. (Re-glued with Supa-Glue, BIG MISTAKE). It still cut out so removed case again.

Noticed that where the cord exits there are plastic lugs to hold it firmly. Where these had pressed, the cord was flattened.

Removed the cord ends and cut through the cord, past the flattened section. Resoldered the new ends, used soldering iron to melt part of restraining lug. I put a blob of silastic where the cord exits and resealed case, using different glue and electrical tape. The end result isn't neat but it works.

EDITORS COMMENT :-

For anyone contemplating repairing their own AC Plug Adaptors I would strongly advise them to leave it to the experts. 240V AC is LETHAL. Unless you know what your'e doing leave it alone. We prefer you among the living.

For persons insisting on repairing their AC Plug Adaptors I would like to point out that there's another way to take the case apart, but don't forget you are doing it at your own risk.

1) Put plug pack on it's side on a hard surface like a breadboard.

2) With a small hammer tap along the joint repeating on all four sides till the glue cracks. Be carefull not to hit too hard as it will damage the case. Too soft and glue will not crack.

The two places where the lead usually breaks is where it leaves the case and near the plug as well. When repairs are done reassemble using a glue designed for plastics as the wrong type could damage case.

FIND UPDATE BY ROBERT QUINN

I modified the FIND routine along the line of Larry Taylor's ENHANCED FIND, making it work properly with LPRINT command as suggested by the editor in issue #15 of the H.V. VZ Journal.

Also line numbers and memory locations are now seperated with COLONS instead of spaces. The mods are very simple, line numbers are as in Larry's ASSEMBLER LISTING in the Journal :-

```
076      CALL 032AH
079      LD   A,3AH
080      CALL 032AH
090      CALL 032AH
```


be accessed from BASIC. Because the method used for either mode is very similar, our discussion will focus on single density dot graphics. Various printer manuals display the necessary code in one or more of the following ways.

```

ASCII      ESC  K  +  n1 + n2
Decimal    (27)D K(75)D n1  n2
           (27),o (75),o (n1) (n2)
Hexidecimal (1B)H (4B)H (n1) (n2)
           (1B),o (4B),o (n1) (n2)
    
```

The first two values (27) and (75) put the printer into normal density bit image mode. The next two values, n1 and n2 tell the printer how many bytes of graphic data will be transmitted. They are arranged in low byte, high byte order. For example if we were doing a screen dump, each line would require 384 bytes of data. The low byte and high byte can be calculated in this way.

```

high byte n2 = INT(384 / 256)
low byte n1 = 384 - n2 * 256
    
```

Using this method n1 = 128 and n2 = 1. These values will, of course vary according to the number of bytes to be sent. What follows next, is a stream of graphics data, which, in the case of the example used above, will consist of 384 individual bytes. Provided the low byte, high byte values, when calculated out,

eg. no. of data bytes = n1 + 256 * n2

equals the number of graphics data bytes which follow, the design will be printed. If the printer does not respond by printing the graphic, it will usually mean that either the low byte - high byte values haven't been entered correctly, or that the printer has not yet received the expected number of data bytes and is waiting for them.

To illustrate the procedure, I will demonstrate how to print this heart shaped character ♥ using single density, bit image, dot graphics. This character consists of nine dot columns. Each column is represented by a single byte of data. In addition, every column is made up of eight rows, each of which is represented by a single bit within the byte of data. When reading a column from the bottom up we begin at bit 0, which has the value 1, and finish at bit 7, which is equal to 128. A single data byte is calculated by totalling these row values assigned to each of the dots printed in a column. Because the character consists of nine columns, it is represented by nine similarly calculated data bytes.

```

bit Value
7 - 128 00000000
6 - 64  00000000
5 - 32  00000000
4 - 16  00000000
3 - 8   00000000
2 - 4   00000000
1 - 2   00000000
0 - 1   00000000
    
```

By thus totalling each column in turn, vertically, from left to right we arrive at the following byte values.

112, 248, 252, 126, 63, 126, 252, 248, 112

The number of data bytes to be sent to the printer to produce this particular character is nine. Represented in low byte - high byte form this is shown as,

```

low byte = 9
high byte = 0
    
```

So to produce the heart character, we send the following data to the printer.

Put printer in graphics mode :- 27,75,
 Number data bytes (low byte - high byte) :- 9,0,
 Data bytes :- 112,248,252,126,63,126,252,248,112

The easiest way to accomplish this from BASIC, would be as follows.

```

100 REM SEND EPSON CODE TO PUT PRINTER IN SINGLE DENSITY BIT
110 REM IMAGE MODE.
115 REM *****
120 LPRINT CHR$(27);"K";
125 REM *****
130 REM LOW BYTE - HIGH BYTE DATA TO TELL PRINTER HOW MANY
140 REM BYTES OF GRAPHICS DATA TO EXPECT.
145 REM *****
150 DATA 9,0
155 REM *****
160 REM NINE GRAPHICS DATA BYTES NECESSARY TO PRODUCE A
170 REM HEART SHAPED CHARACTER.
175 REM *****
180 DATA 112,248,252,126,63,126,252,248,112
185 REM *****
190 REM SOME VALUES SUCH AS 0,10,11,12,13 AND THE INVERSE
200 REM AND GRAPHICS CHARACTER VALUES FROM 128 TO 255 WON'T
210 REM REACH THE PRINTER IF WE LPRINT THEM, SO SEND THE LOW
220 REM BYTE - HIGH BYTE AND NINE DATA BYTES OUT THE PORTS.
225 REM *****
230 FOR I=1 TO 11:READ D: GOSUB 300:NEXT
240 END
245 REM *****
250 REM READ PORT ZERO TO CHECK IF PRINTER IS READY. WHEN
260 REM IT IS, SEND DATA OUT PORTS 13 AND 14.
265 REM *****
300 IF (INP(0)AND1)<>0 THEN 300 ELSE OUT 13,D:OUT 14,D
310 RETURN
320 REM *****
    
```

To further assist those of you, who may still be experiencing difficulty in getting your EPSON type printer to produce dot graphics, I have written a short DOT MATRIX GRAPHICS EDITOR in BASIC. This program enables a design to be drawn on the screen by moving a cursor within a grid, which is 8 rows high and 11 columns wide. Once the design is completed and the RETURN key pressed, the graphics data is automatically tabulated by the program. Following this, the printer is set to single density bit image mode and the eleven bytes of graphics data are sent to the printer, preceded, of course by the low byte - high byte equivalent of the number eleven.

Once the concept of producing images on the printer, using dot graphics, has been fully grasped and you have experienced the first joys of success, there remains only to experiment with your own designs. There are two ways, in which you can create your images prior to transferring them to the printer. The first is to do a drawing on squared paper, calculate the column values, create data statements and then transmit them to the printer. The second, possibly easier method, depending on the resolution required, is to use an EDITOR to draw on the HIRES screen. On completion, it can read the screen, compute the data and send it to your printer. Having used both approaches, I find an EDITOR easier. Don't despair if you don't experience immediate success, my early frustrations culminated in the successful creation of the VZ-EPSON Printer Patch.

```

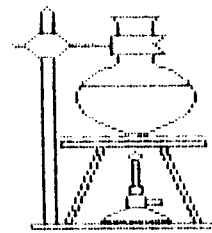
100 REM #####
110 REM # DOT MATRIX GRAPHICS EDITOR BY LARRY TAYLOR #
120 REM #####
130 REM
150 REM #####
160 REM # CONTROL KEYS FOR DOT MATRIX GRAPHICS EDITOR #
170 REM #####
180 REM # [M] - CURSOR LEFT      [,] - CURSOR RIGHT #
200 REM # [.] - CURSOR UP      [SPACE] - CURSOR DOWN #
240 REM # [L] - INSERT BLOCK    [;] - RUBOUT BLOCK #
250 REM # [RETURN]-PRINT SHAPE  [C] - CLEAR SCREEN #
290 REM #####
300 REM # INITIALISE VARIABLES #
310 REM #####
320 P=28672:D=60:E=207:DIMV(10)
330 CLS:POKE30744,1:COLOR2
340 REM #####
350 REM # SET UP EDITOR DISPLAY #
360 REM #####
370 PRINT@ 0, " ";
380 PRINT@ 32, "  DOT MATRIX GRAPHICS EDITOR  ";
390 PRINT@ 64, " ";
400 FORT=3TO14:POKEP+T*32,154:POKEP+T*32+31,149:NEXT
410 PRINT@480, " ";:POKEP+511,151
420 P=28844:PRINT@130, "BIT VALUE"
430 FOR T=7 TO 0STEP-1
440 PRINT@162+(7-T)*32,USING"##  ";T;:PRINTUSING"### ";2^T;
450 PRINT "  " :NEXT
460 PRINT@427, " "
470 M=X+Y*32:V=PEEK(P+M)
480 REM #####
490 REM # READ KEYPRESS AND FLASH CURSOR #
500 REM #####
510 A$=INKEY$:POKEP+M,V:FORT=1TOD:NEXT:POKEP+M,E
520 FORT=1TOD:NEXT:A$=INKEY$:IFA$=""THEN510
530 A=ASC(A$):IFA=67THENRUN
540 IFA=13THEN560
550 IFA<>32ANDA<>44ANDA<>46ANDA<>59ANDA<>76ANDA<>77THEN510
560 POKEP+M,V:FORT=1TOD:NEXT
570 IFA$=CHR$(13)THENGOSUB690
580 IFA$="M":X=X-1:IFX<0 :X=0
590 IFA$=",":X=X+1:IFX>10:X=10
600 IFA$="." :Y=Y-1:IFY<0 :Y=0
610 IFA$=" " :Y=Y+1:IFY>7 :Y=7
620 M=X+Y*32
630 IFA$="L":POKEP+M,128
640 IFA$=";":POKEP+M,96
650 V=PEEK(P+M):GOTO510
660 REM #####
670 REM # CALCULATE DATA VALUES #
680 REM #####
690 FORX=0TO10:FORY=0TO7:M=X+(7-Y)*32
700 IFPEEK(P+M)<>128THEN720
710 V(X)=V(X)+2^Y
720 NEXT:NEXT
730 REM #####
740 REM # PRINT GRAPHIC IMAGE #
750 REM #####
760 LPRINTCHR$(27);CHR$(75);
770 D=11:GOSUB790:D=0:GOSUB790
780 FORT=0TO10:D=V(T):V(T)=0:GOSUB790:NEXT:X=0:Y=0:RETURN
790 IF(INP(0)AND1)<>0THEN790ELSEOUT13,D:OUT14,D:RETURN

```

```

5 DIMD(772)
8 LPRINTCHR$(27);"A";CHR$(7);
10 FORT=1T0772:READD:D(T)=D:NEXT
15 FORI=0T011:LPRINT" ";
18 FORX=1T04:D=D(X):GOSUB50:NEXT
20 FORT=1T064
25 D=D(4+I*64+T):GOSUB50:NEXT
35 LPRINT:NEXT:END
50 IF(INP(0)AND1)<>0THEN50ELSEOUT13,D:OUT14,D:RETURN
90 DATA7,75,64,0
200 DATA0,0,0,0,0,0,0,0,0,63,64,128,64,63,0,0,0,0,0,0,0,0,0,0,0,0,0
205 DATA0,0,0,0,0,0,8
210 DATA12,11,8,8,8,8,8,8,8,8,8,8,11,12,8,0,0,0,0,0,0,0,0,0,0,0,0,0
215 DATA0,0,0,0,0,0
220 DATA0,1,1,1,1,2,4,8,16,240,16,16,16,240,16,8,4,2,1,1,1,1,1
225 DATA1,1,1,1,1,1,1,1,15
230 DATAB,248,8,8,8,8,8,8,8,8,8,8,248,9,10,12,8,0,0,0,0,0,0,0,0,0,0
235 DATA0,0,0,0,0,0,0
240 DATA128,64,64,64,192,32,16,8,4,7,4,4,4,7,4,8,16,32,192,64,64
245 DATA64,64,64,64,64,64,64,64,64,64,248
250 DATAB,15,8,8,8,8,8,8,8,8,8,8,143,72,40,24,8,0,0,0,0,0,0,0,0,0,0
255 DATA0,0,0,0,0,0,0
260 DATA0,0,0,0,0,0,0,0,0,255,0,0,0,255,0,0,0,0,0,0,0,0,0,0,0,1,2,4
265 DATAB,16,16,32,32,32
270 DATA64,128,0,0,0,0,0,0,0,0,0,0,128,64,32,32,32,16,16,8,4,2,1
275 DATA0,0,0,0,0,0,0,0,0
280 DATA0,0,0,0,0,0,0,0,0,255,0,0,0,255,0,0,0,0,0,0,0,0,0,0,0,15,48,224,32
285 DATA32,32,32,32,32,32,32,32,32
290 DATA32,32,32,32,32,32,32,32,32,32,32,32,32,32,32,32,32,32,32,32,32,32
295 DATA32,32,32,32,224,48,15,0,0,0,0,0,0
300 DATA0,0,0,0,0,0,0,0,0,255,0,0,0,255,0,0,0,0,0,0,0,0,0,0,0,192,48,12,2
305 DATA1,0,0,0,0,0,0,0,0
310 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,2,12,48,192
315 DATA0,0,0,0,0,0
320 DATA0,0,0,0,0,0,0,0,0,255,0,0,0,255,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
325 DATA128,64,32,32,16,16,8
330 DATAB,4,4,2,2,2,2,2,2,2,4,4,8,8,16,16,32,32,64,128,0,0,0,0,0
335 DATA0,0,0,0,0,0,0
340 DATA0,0,0,0,0,0,0,0,0,255,0,0,0,255,0,184,168,168,168,40,40
345 DATA168,168,168,168,40,47,168,175,168,168,40
350 DATA40,168,168,168,168,41,42,169,168,168,168,40,40,168,175
355 DATA168,175,40,40,168,168,168,168,40,40,168,168,168,184,0,0
356 DATA0
360 DATA0,0,0,0,0,0,0,0,0,255,0,0,0,255,0,0,0,0,0,0,0,0,0,0,0
365 DATA0,0,3,28,227,28,224,0,0,0,0
370 DATA0,0,0,0,192,63,32,63,192,0,0,0,0,0,0,0,224,28,227,28,3,0,0
375 DATA0,0,0,0,0,0,0,0,0
380 DATA0,0,0,0,0,0,0,0,0,255,0,0,0,255,0,0,0,0,0,0,0,0,0,0,0,1
385 DATA14,113,142,112,128,0,0,0,0,0
390 DATA0,0,0,0,7,252,4,252,7,0,0,0,0,0,0,0,0,0,0,0,128,112,142,113,14
395 DATA1,0,0,0,0,0,0,0,0
400 DATA0,0,0,0,0,0,0,0,0,255,0,0,0,255,0,0,0,0,0,7,56,199,56,192
405 DATA0,0,0,0,0,0,0,0,0
410 DATA0,0,1,62,194,66,66,66,194,62,21,20,20,20,28,0,0,0,0,0
415 DATA192,56,199,56,7,0,0,0,0,0,0,0
420 DATA0,0,0,0,0,7,5,5,5,253,5,5,5,253,5,5,29,229,29,229,5,5,5
425 DATA5,5,5,5,13,29,45,45,77
430 DATA77,141,13,13,13,13,13,13,13,13,13,141,77,77,45,45,29,13
435 DATA5,5,5,5,5,229,29,229,29,5,5,5,5,7

```



As I was getting quite a few disk I/O errors I decided to give the head a clean using a CLEANMASTER head cleaning disk purchased from Dick Smith. The head is nice and clean now, but my drive no longer READS or WRITES anymore and I have'nt had chance to fix the problem as I had a deadline to meet with this issue. I suspect the pressure pad may have been damaged. My second drive is OK and I'm thankful it didn't suffer the same fate as it's head was cleaned first.

The reason for the mishap is quite simple, it's lack of proper instructions that come with the disk. The cleaning disk is designed for dual head drives and as the VZ drive has only a single head it's quite easy to put it in the wrong way and that's what I did. The instructions say to insert the C/Disk according to the arrows, but there's no arrows on disk. For VZ drives use the following steps :-

- 1) Turn C/Disk over and put no more than 5 (FIVE) drops of cleaning fluid to both oblong cutouts on back of disk.
- 2) Turn disk right way up again so that the label with instructions is on top.
- 3) Turn disk 90 Deg. so that the label is on the left side of disk and the WRITE PROTECT notch is away from you.
- 4) Insert C/Disk in drive and close drive door.
- 5) Type in DIR and press RETURN. This will start the cleaning process.
- 6) After 30 Sec's press (-) key to stop drive. Open drive door and remove C/Disk.

Below are a series of drawings showing the CLEANMASTER disk for persons not familiar how the C/Disk is used by the drive.

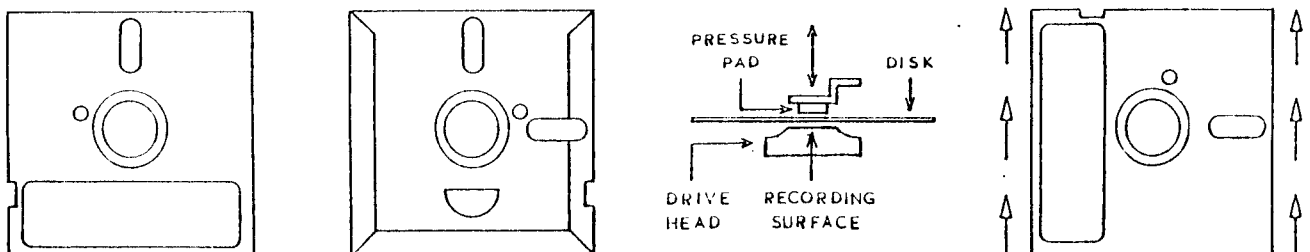
The drawing on the left depicts top side of C/Disk while the one next to it shows reverse side of C/Disk. Note the three cutouts on this side.

The third drawing shows the drive recording head, inserted disk and pressure pad. With the drive door open the pressure pad is lifted up allowing for easy removing/inserting of disks.

The C/Disk must be inserted into drive as shown in the last drawing on the right. The reason for that is because the C/Disk is made of different material and has a rougher surface. If inserted the normal way the pressure pad would rest on the cleaning surface and there would be a good possibility of the pressure pad tearing the cleaning surface which is what happened to me.

The act of closing drive door lowers pressure pad onto the exposed surface of the disk in the cutout pressing disk against the head where reading/writing from/to disk is done. Note :- READING/WRITING is done on bottom of disk.

The comments above relate to the CLEANMASTER HEAD C/DISK only. If using other brands of C/Disk make sure that the cleaning surface is on bottom and that the pressure pad does not rest on any part of cleaning surface.



GALACTIC EMPIRES
SOFTWARE WRITTEN AND MARKETED BY SCOTT LE BRUN
AND REVIEWED BY PETER J HILL (AUCKLAND N.Z)

This program includes a very comprehensive and easy to understand scenario. The instructions are also easy to follow. So read them and play--You will be glad you did!.

You-The power hungry emperor of a small star system ,must build up your empire and dispatch your star ship's to explore other star systems.

The object of all this exploring is to plunder and conquer these star systems and thereby increase your power and wealth to continue feeding your lust for supremacy.

You can have up to 4 players in this game or you can play the master gamer (YOUR VZ). You can also nominate how many turns you wish to play, thus avoiding a never ending game and no result. You can even rename your home star, if you wish. (Note new name must start with F).

Once you have fed the VZ this data, you will be informed that the computer is working thing's out. This is a really nice touch and at least you don't start thinking the games hung up when faced with a blank screen.

By pressing the 0 key you will be given a command list/menu which will enable you to gather information, such as battle results, star ship locotion, star map etc.

Galactic Empires is a super space simulation where you must pit your skill and cunning to beat your opponent, who is out to protect his own planets. I feel that Galactic Empires is as good as, if not better than the star trek game which is available.

You will enjoy playing this game and it will really go to your head when you start building your empire. Scott has done a good job writing this program, as he has done with many others.

This game is a must for the adventurous gamer and is well worth the cost, which at the time of writing this review is only A\$12-50. TOP MARKS FOR THIS ONE SCOTT

AVAILABLE FROM :- Scott LE BRUN 59 BRENTWOOD DRIVE
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INTER. FUNCTION KEYS BY R. QUINN 16

```

7A2B:3AFB68 LD A,(68FB)
7A2E:FE73 CP 73
7A30:CC477A CALL Z,7A47
7A33:FE79 CP 79
7A35:CC437A CALL Z,7A43 INTERRUPT ROUTINE
7A38:FE5B CP 5B
7A3A:CC437A CALL Z,7A43
7A3D:FE7A CP 7A
7A3F:CC437A CALL Z,7A43
7A42:C9 RET

```

```

7A43:320070 LD (7000),A
7A46:C9 RET

```

```

7A47:2A2078 LD HL,(7820)
7A4A:010072 LD BC,7200
7A4D:3A1878 LD A,(7818)
7A50:FE00 CP 00
7A52:3E20 LD A,20
7A54:2002 JR NZ,02 (7A58)
7A56:3E60 LD A,60
7A58:77 LD (HL),A CURSOR CLEAR
7A59:323C78 LD (783C),A SCREEN ROUTINE
7A5C:23 INC HL
7A5D:79 LD A,C
7A5E:BD CP L
7A5F:20EC JR NZ,EC (7A4D)
7A61:78 LD A,B
7A62:BC CP H
7A63:20E8 JR NZ,E8 (7A4D)
7A65:C9 RET

```

```

7A66:F5 PUSH AF
7A67:C5 PUSH BC
7A68:D5 PUSH DE
7A69:E5 PUSH HL
7A6A:3E00 LD A,00
7A6C:329C78 LD (789C),A DIR/STATUS
7A6F:CD0649 CALL 4906 ROUTINE
7A72:CD052 CALL 52CD
7A75:E1 POP HL
7A76:D1 POP DE
7A77:C1 POP BC
7A78:F1 POP AF
7A79:C9 RET

```

```

7A7A:F5 PUSH AF
7A7B:C5 PUSH BC
7A7C:D5 PUSH DE
7A7D:E5 PUSH HL
7A7E:CD405 CALL 05C4 LDIR/LSTATUS
7A81:CB47 BIT 0,A ROUTINE
7A83:2007 JR NZ,07 (7A8C)
7A85:3E01 LD A,01
7A87:329C78 LD (789C),A
7A8A:18E3 JR E3 (7A6F)

```



```

7A8C:21E600 LD HL,00E6
7A8F:014B00 LD BC,004B
7A92:CD5C34 CALL 345C
7A95:E1 POP HL LDIR/LSTATUS
7A96:D1 POP DE ROUTINE CONT.
7A97:C1 POP BC
7A98:F1 POP AF
7A99:C9 RET
    
```

The first part of the disassembly is for an INTERRUPT routine to scan for pressing of SHIFT X or SHIFT C or SHIFT V or SHIFT B keys. The INTERRUPT routine is set up in a block of unused memory in the communications region, starting at address 31275.

Three of the CALLS in this routine, one for each pair of keys excepting SHIFT C, address the start of the same short routine, also set up in the same block of memory after the end of the INTERRUPT routine. This CALLED routine copies the content of the A register into the first cell of video memory whenever one of the three pairs of keys are pressed.

To set up and activate the INTERRUPT and various CALLED routines, use the accompanying INTDATA program.

If you now hold down the SHIFT key and press <X> or <V> or , you will see a character appear in upper right of screen, a different character for each key.

Each of the four CALLS in the INTERRUPT routine can be changed to address any routine in ROM or RAM; that routine can then be executed when the allocated pair of keys are pressed. The address is POKEd into the CALL instruction in LO HI format :

HI%=ADDRESS/256:LO=ADDRESS-HI%*256:PRINTLO,HI%

LO is POKEd in as the second byte of the CALL, HI% as the third byte (see the disassembly).

When run, the INTDATA program sets up a CURSOR CLEAR SCREEN (CCS) machine code routine (31303 to 31333). This routine allows you to blank out the screen from the cursor position to bottom right of screen but leaving intact the content of the screen to the left of and above the cursor.

SHIFT C keys have been allocated to this function. The LO and HI of the start address of CCS are 71 and 122. INTER has POKEd these two numbers into the SHIFT C CALL address in the INTERRUPT.

Move the cursor to any position on the screen, hold down SHIFT and press C key to clear screen from cursor position. If your screen is full of text and other garbage, you can enter commands like LIST, RUN, PRINT, etc., without having to move the cursor to bottom of screen, by using CCS to selectively wipe clean the screen. Because CCS is accessed thru the INTERRUPT EXIT, it can be used anytime, even if a BASIC program is running.

For those of you who have a disk drive, there is a DIR:STATUS routine in the code set up by INTDATA, starting at 31334. To allocate SHIFT B keys to this routine in the INTERRUPT,

POKE31296,102

Now (making sure you have disk in drive and door is shut) you can display the directory and status of the disk anytime (even if a BASIC program is running) simply by holding SHIFT and pressing B key.

There is also included in the code an LPRINT DIR:STATUS routine. To allocate SHIFT V keys to this routine,

POKE31291,122

Again, with your drive ready, hold SHIFT and press V key. You hear a warning sound only? You must have forgotten to switch on your printer! With printer on, hold SHIFT and press V key to get a print out of the directory and status of the disk in the drive.

I leave SHIFT X to your imagination. What do YOU want it to do?

Disk drive owners can BSAVE the INTERRUPT and associated routines thus :

BSAVE"INTER",7A2B,7A99

To use from disk, BLOAD"INTER" then activate the INTERRUPT by POKEing a jump to start of INTERRUPT (JP 31275) into the INTERRUPT EXIT at 30845,

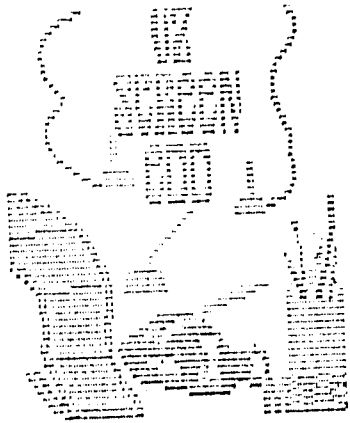
POKE30846,43:POKE30847,122:POKE 30845,195

Be sure you POKE 30845 last otherwise you will activate the INTERRUPT EXIT before you have POKED the address you want it to jump to.

Any routine you design to be executed as a function of these keys should start by PUSHing onto the STACK any registers used in the routine and end by POPing those registers back from the STACK.

```

2 *****
4 * INTERRUPT FUNCTION KEYS DESIGNED BY ROBERT QUINN *
6 *****
8 :
10 FORR=31275TO31385:READA:POKER,A:B=B+A:NEXT
20 IFB<>13921THENSOUND30,2;20,1:PRINT"*****":END
30 POKE30846,43:POKE30847,122:POKE30845,195
100 DATA58,251,104,254,115,204,71,122,254,121,204,67,122
120 DATA254,91,204,67,122,254,122,204,67,122,201,50,0,112,201
130 DATA42,32,120,1,0,114,58,24,120,254,0,62,32,32,2,62,96,119
140 DATA50,60,120,35,121,189,32,236,120,188,32,232,201
150 DATA245,197,213,229,62,0,50,156,120,205,6,73,205,205,82,225
160 DATA209,193,241,201
170 DATA245,197,213,229,205,196,5,203,71,32,7,62,1,50,156,120,24
180 DATA227,33,230,0,1,75,0,205,92,52,225,209,193,241,201
    
```

MTS**PRESENTS**

VZ Screen Edd is a new powerful utility program for the VZ computers. The utility allows easy and fast drawing of high resolution screens for use in what ever you please.

The program is fitted out with a whole host of features including instant backgrounds, built in lettering, many types of printer dumps, a fully transparent cursor, fast screen movement and the option of using joystick. The utility is also fitted out with both disk and tape functions and is standard for any set up as it makes system checks before trying anything that

may not be connected such as a disk drive.

The utility's most useful feature though is its ability to both load and save to tape. No screen editor has previously been able to do so in a successful and usable way. Here begins the world of screen shows for tape owners. Yes, as described in the manual it is possible to make a screen show on tape.

The utility comes complete with a six page manual which also contains a video worksheet for your own use and on top of that there is also four example screens to get you started. The manual fully explains how to use the utility, how to use your designed screens and how to go about designing a screen from start to finish. A full list of commands is also in the manual. The utility also, because of its setup, is able copy screens easily between tape and disk and between tape and tape etc.

Overall this utility presents a very worth while investment for both tape and disk owners. Disk owners can also use the tape facility as a reliable back up for their screens. Who knows what someone will dream up as a usage for it.

PRICE \$25.00 + \$2.00 P&H

See me at a H.V.VZ.U.G meeting and pay only \$25.00 or \$20.00 if you supply a tape or disk or,

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MTS
MATTHEW TAYLOR SOFTWARE

EXTENDED DOS VERSION 1.0 (C) - COPYRIGHT - DAVE MITCHELL - 1987

MERGE - MERGES basic file from disk with program in memory.
 DIRA - See example - T:MENU B:PATCH3.1 B:WORDPROC
 B:EXTDOS E B:EXTDOS R W:DOS-INST
 LDIRA - As above, but to screen and printer.
 DIRB - See example - T:MENU 01 00 7AE9 801B 0532
 B:PATCH3.1 01 0B 7200 771F 051F
 LDIRB - As above, but to screen and printer.
 STATUSA - Prints free disk space to screen on one line.
 LSTATUSA - As above, but to screen and printer, see below.
 534 RECORDS FREE 63.500K FREE
 OLD - Restores a program after using the NEW command.
 OLD. - Prints START, END and LENGHT of program in memory in HEX.
 DEC XXXXX - Converts DECIMAL to HEX
 HEX XXXX - Converts HEX to DECIMAL
 STATUSA and LSTATUSA also works with Version 1.0 DOS.

The EXTENDED DOS is available in the two versions below :-
 EXTDOS R - T.O.M. SEEKING (SELF RELOCATING)
 EXTDOS E - FOR 2K RAM AT 6000-67FF HEX
 Price - \$10.00 each or the two for \$15.00. Availble from :-

Dave MITCHELL - (079) 27 8519
 24 ELPHINSTONE STREET NORTH ROCKHAMPTON QUEENSLAND 4701

FOR INFORMATION IN NEWCASTLE AREA :- Joe LEON - (049) 51 2756

FOR SALE - E & F W.P. PATCH 3.1

PATCH3.1 - COPYRIGHT - HUNTER VALLEY VZ USERS' GROUP

This single Patch will convert your E & F TAPE WORD PROCESSOR for full DISK use while retaining all TAPE functions. It can be used with 1 or 2 DRIVES. Below are the two Menus.

E)DIT TEXT	L)OAD
C)LEAR TEXT	S)AVE
P)RINT TEXT	D)IR
L)OAD FILE	E)RA
S)AVE FILE	R)EN
V)ERIFY FILE	I)NIT
Q)UIT PROGRAM	1-2) DRIVE 1
D)ISK	M)ENU

Fast SAVING and LOADING of TEXT DATA to and from Disk is provided using Block SAVE or LOAD.

Full instructions are supplied together with a Tape to Disk transfer utility for your E & F Tape Word Processor.

This Patch will work with V1.0 or V1.2 Disk Controller. A STATUS facility has been added for V1.0 DOS owners.

SYSTEM REQUIREMENTS :- DISK DRIVE + V1.0 OR V1.2 DOS
 VZ300 + 16K RAM PACK OR VZ200 + 18K (16K RAM PACK + 2K)

The price - \$10.00, NZ AU\$12.00 and is available from :-

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